

Claims

1. An imaging device comprising
at least one image capturing subsystem of a first type, comprising a lens arrangement, configured to produce images,
at least one image capturing subsystem of a second type comprising a lens arrangement, having optical or light gathering properties different from the subsystem of first type, configured to produce an image, and
a controller configured to select the subsystem with which an image is to be taken.
2. The device of claim 1, wherein the image capturing subsystem of the second type comprises a macro lens arrangement.
3. The device of claim 1, wherein the image capturing subsystem of the second type comprises a high magnification lens arrangement.
4. The device of claim 1, wherein the image capturing subsystem of the second type comprises a tele lens arrangement.
5. The device of claim 1, wherein the image capturing subsystem of the second type comprises a wide-angle lens arrangement.
6. The device of claim 1, wherein the image capturing subsystem of the second type comprises an anamorphically cylindrical lens.
7. The device of claim 1, wherein the image capturing subsystem of the second type comprises a color matrix filter, and the controller is configured to take images with the subsystems in sequence to capture fast motion objects.
8. The device of claim 1, wherein the resolution of the image produced by the image capturing subsystem of the second type is a resolution used in videoconferencing applications.
9. The device of claim 8, wherein the resolution of the image produced by the image capturing subsystem of the second type is CIF or QCIF.
10. The device of claim 1, wherein the image capturing subsystems comprise a lens system and a sensor array configured to produce an electric signal and the device comprises a processor operationally connected to the sensor arrays and configured to produce an image proportional to the electrical signal received from the sensor arrays.
11. The device of claim 10, wherein the device comprises a sensor array divided between image capturing subsystem types.

12. The device of claim 1, wherein the device comprises a lenslet array with at least four lenses.

13. The device of claim 12, wherein the lens arrangement of the image capturing subsystem of the first type device comprises three lenses from the lenslet array, and a portion of the sensor array, and

the lens arrangement of the image capturing subsystem of the second type device comprises the fourth lens from the lenslet array, and a portion of the sensor array.

14. The device of claim 13 wherein image capturing subsystem of a first type is configured to produce a color image and the image capturing subsystem of the second type is configured to produce an image.

15. The device of claim 14, wherein the lens arrangement of the image capturing subsystem of the first type comprises a red, green and blue color filter, each associated with a lens.

16. The device of claim 14, wherein the lens arrangement of the image capturing subsystem of the first type comprises a cyan, magenta and yellow color filter, each associated with a lens.

17. The device of claim 14, wherein the lens arrangement of the subsystem of the second type comprises a Bayer matrix.

18. The device of claim 13, wherein the image capturing subsystems of the first and the second type are configured to produce images in the same color space.

19. An imaging device comprising
a lenslet array with four lenses, at least one sensor array,
an image capturing subsystem of a first type comprising a lens arrangement, configured to produce images, the lens arrangement of the image capturing subsystem of a first type device comprising at least three lenses from the lenslet array, and a sensor array,

an image capturing subsystem of a second type comprising a lens arrangement, having optical or light gathering properties different from the subsystem of first type, configured to produce an image, the lens arrangement of the image capturing subsystem of a second type device comprising at least one lens from the lenslet array, and a sensor array,

and a controller configured to select the subsystem with which an image is to be taken.